

insignia conspicuously displayed; and at the outset of the conference one of the delegates stated, that if Sir Charles would only say at once that he intended to repeal the window-tax, he would escape two hundred speeches. The implied threat, however, only seemed to determine the Chancellor all the more impudently to hold out till the last—that is, “till the 14th,” as he told them, when the budget was to be opened. In the meantime, he declared it to be “impossible to give the deputation any intimation of what he intended to do,”—which may augur well enough for intricate or compensatory calculations of a debtor and creditor state between window-tax abolition and substitute, but looked rather ominous in reference to a clean sweep of the obnoxious impost out of the budget-book at once and away.

#### ARCHITECTURAL COMPETITIONS.

**Cambridge Laneside Asylum.**—A large number of designs has been received. The visitors met on Tuesday, in last week, to inspect the plans sent in, and twelve were selected and referred to a sub-committee appointed for that purpose. The estimates of the plans selected varied from 17,000*l.* to 25,000*l.*

**Cockermouth Church Competition.**—A correspondent informs us that thirty-nine architects competed for this restoration, and that the premium of 50 guineas has been awarded to Messrs. Hay, of Liverpool. The designs were referred by the committee to Mr. Atkinson, Architect, of York.

**Markets at Bolton.**—Twenty-five sets of plans have been received in competition. The corporation have appointed Mr. G. Godwin, Architect, to examine and report upon them.

#### RAILWAY JOTTINGS.

This gross traffic since 1st January, on 6,354 miles, amounts to 1,090,823*l.*, which gives an average of 17*4* *8* *4*<sup>1</sup>/<sub>2</sub> *d.* per mile. The corresponding period of last year, on 5,485 miles, produced 939,965*l.*, being equal to 17*1* *7* *5*<sup>1</sup>/<sub>2</sub> *d.* per mile.—The London and North-Western Company, in consequence of competition with the Shrewsbury, has again reduced the fares between Wolverhampton and Shrewsbury. The distance *rid* the Shropshire line is forty-five miles, and the fare, first class, 1*s.*; second class, 9*d.*; third class, 6*d.*—At Lincoln County Court a verdict of 5*l.* damages and costs was lately given against the Great Northern, for having started a passenger train before the advertised time for departure.—Mr. Peto has commenced operations on the Birmingham and Oxford. He is under contract to finish the line by this time twelvemonth.—The great bridge in connection with the South Wales line at Chepstow, over the Wye, is being rapidly pushed on; and it is anticipated that one of the tubes will be fixed, and the rails laid, so as to be ready for the transit of trains by July or beginning of August next. The works are rapidly progressing from Swansea to Carmarthen, and it is said, that in the course of the summer the works from Carmarthen to Pembroke will be resumed.—By last accounts from the Isthmus of Panama we learn that materials for the railroad, in large quantity, had arrived at Chagres. About 600 men were on the work, and 400 or 500 more were expected in a few days; 250 from New Orleans. A large portion of the men were engaged on the line from Navy Bay to Gatun, the first station on the river. The pile-drivers were at work at Navy Bay, and the superintendent at Gatun says that he will soon have one mile of road ready for the iron.

**DECORATION OF A HOUSE.**—Some thousands of bells, intended for the outward decoration of a house of a Malay prince, were made in Birmingham some months ago.

**PROPERTY INSURED IN LONDON.**—By a recent return from the various fire insurance companies of the amount of property in the metropolis insured by them, we find it exceeds the enormous amount of one hundred and sixteen millions sterling.

#### TRACERY ON GEOMETRIC PRINCIPLES.

ARCHITECTURAL ASSOCIATION.

On the 31st ult. Mr. Billings described a variety of combinations of tracery produced upon the geometric principle advocated by him at the Institute some time ago, and mentioned by us at the time. In touching on the origin of tracery, the lecturer opposed the notion that windows approached nearer and nearer until piers were left merely as mullions, and thus required upper panel work or tracery. His theory was, on the contrary, that early single windows being very small, gradually became larger, and at length required a framework to support the glass.

He then proceeded to his proofs of the existence of a geometric system in old tracery, and said that, whether in the largest window or smallest panel, the same diagram lines were used, varied of course according to the nature of the composition: the equilateral triangle was the parent of a considerable number of designs, but the square of many more.

The great mass of minute tracery was all formed upon the lines of squares; and he took the credit of being the first modern to declare “That however different in its forms, the centres of the curves, composing the great mass of tracery, were upon one and the same series of lines.” The lecturer then exemplified what he had produced upon the same principle in original designs, and which we have elsewhere mentioned.

A discussion took place after the lecture, in which Mr. J. K. Colhug, Mr. T. Willson, and others expressed their doubts as to the extension of the principle beyond the figures he had chosen (the square and the circle), and, if applicable to the generality of minute tracery, whether it could be considered so to many ancient windows, of which we have examples.

Mr. Creeke said, he could not concur in its value as a general principle of design. He considered that a design was formed in the mind without reference to arbitrary and occult geometric principles, and he doubted if these principles would be an adequate means of developing such mentally conceived designs; but, on the contrary, he thought they would be liable to operate as trammels, leading the designer he knew not whither.

#### BOOKS.

**The Year-Book of Facts in Science and Art, exhibiting the most important discoveries and improvements of the past year.** By JOHN TIMBS, Editor of “The Arcana of Science and Art.” London: Bogue, Fleet-street, 1881.

Such a mighty host of “original” books, which have only old materials and ideas hashed up anew into “original” forms, now issue from the press, that it is really refreshing to find a little work like this, which only pretends to be a compilation—no, not even anything so “original” as that, but simply a judicious selection—thrust into one’s hand, in which may be seen, as through a focus, much that has been of sterling interest in the progress made in art and science during the past year, passing in review just as it issued fresh from the brains whence it was originally eliminated. Judgment and ability in the present literary age, we think, may be well employed in winnowing the chaff and collecting the grain thus otherwise lost to all in the midst of matter of less permanent or sterling interest. We have ever regarded this editor’s periodical efforts with favour, and we see no reason in the present instance to withdraw, or even diminish, that favour. Indeed, it would not only be ungrateful, but self-satisfying in us to do so, considering the honourable position which **THE BUILDER** itself holds in these pages amongst the best of its contemporaries.

The only reference to the contents which we shall at present make relates to a suggestion of our own, as to the connection of the actinic ray of the solar light with negative electricity. In this last year-book we see two facts recorded, which seem further, at least indirectly, to support this idea, namely, that “light (that is, not the luminous ray to the exclusion of the

chemical, but light, synthetically speaking, at least with reference to the actinic principle) is developed in virtue of some peculiar function of the negative pole of the battery,” and, on the other hand, that electricity itself, the antithesis of the actinic force, as we have regarded it, has been found to exercise a singular power of condensing smoke or vapour. In the former case, however, while light, as the more radiant principle, manifests itself at the negative pole, heat, as the less radiant, appears at the positive. We expect shortly to have a new and practically important fact to add to these.

**The Literature of Working Men: being the Supplementary Numbers of “The Working Man’s Friend,” from March, 1850, to February, 1851, inclusive, with Introductory Essay by BENJAMIN PARSONS.** London: John Cassell, Strand.

DOUBTLESS much of this remarkable volume is little more than compilation, though even in this respect it will stand a fair comparison with compilations by hands as skilled in that as these are in their own more “lawful calling,” such as tailoring and shoemaking. There is internal evidence, however, of much more than mere compilation here, and although that gives no surprise to us, this little volume, as a whole, will certainly astonish many who have made a less accurate and just estimate of the calibre of the working men’s mental abilities and acquirements. Next to the great exhibition of his physical and mechanical talents, now about to open on the eye of the world, perhaps there is no more remarkable sign of the times than this first miscellaneous exhibition of what he can do in a sphere of industry and workmanship in which it has hitherto been believed that he would be entirely “out of his element.” Many real “gems of literature” we might readily point to or extract from this latter exhibition of the workman’s industry.

**Remarks on the Amendment of the Law of Patents for Inventions.** By T. TURNER, Esq., Middle Temple, Barrister-at-Law. Elsworth, Chancery-lane, 1881.

THE remarks offered in this small pamphlet are worthy of consideration at the present moment, when the patent law is likely to be more completely revolutionized than the author seems to desire. Being a lawyer himself, he has a natural affection for a law, which every one else almost wishes to get rid of, and therefore speaks up for it, so far, manfully, admitting, of course, as an affectionate friend would, some of its little faults and peccadilloes, and willing to help in amending them, but most unwilling to send the offender “out of the country” altogether. It is Mr. Turner’s opinion that the best course with the patent law probably lies at some point between the “Conservative” and “legal” view taken by Mr. Webster and the “revolutionary” “lay-manifesto” issued by the committee of the Society of Arts.

**The Mahogany Tree: with Notices of the projected Inter-Oceanic Communication of Panama, Nicaragua, and Tehuantepec, in relation to their Productions and the Supply of fine Timber, &c.** Liverpool: Rock & Son.

THIS is, properly speaking, a trade book, got up by those spirited Liverpool mahogany and timber brokers, Messrs. Chaloner and Flemin, whose trade circulars are occasionally quoted in our columns. It contains, however, a *bona fide* compendium of the history and business characters, qualities, and uses of the mahogany tree, with practical suggestions for selection and cutting it in the regions of its growth in the West Indies and central America. In an appendix is a series of documents presented to the Lloyd’s Committee of Registry, in favour of its use for the building of first-class vessels. There are also some lithographic illustrations.

The following quotation may be interesting to our readers:—

“The mahogany tree, from an early period, was used by the Spaniards for shipbuilding.